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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY-DOCKET NO.
09/382,708	08/24/99	KIM	

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HM12/0712

EXAMINER
WILLIS, M.

ART. UNIT	PAPER NUMBER
1215	

DATE MAILED: 07/12/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/382,708	Applicant(s) KIM ET AL.	
	Examiner Michael Willis	Art Unit 1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 24 May 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claims 1 and 5-10 are pending. Claims 2-4 have been cancelled. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

Legible copies of the following documents have been received: DE 4225045, DE 4314305, JP 3206023, JP 3206024, JP 5750912, and JP 1213221. The documents have been considered and PTO Form 1449 has been updated accordingly (see attached copy).

Specification

Corrections to the title and pages 4 and 29 of the specification are acknowledged. Applicant's argument with respect to enablement is found convincing. The objection to the specification with respect to enablement is withdrawn.

Claim Objections

Claim 9 has been objected to in a previous Office Action under 37 CFR 1.75(c). Based on applicant's amendment, the objection is withdrawn.

Response to Amendment: Claim Rejections 35 USC § 112

Claims 1, and 5-10 have been rejected in a previous Office Action under 35 USC 112, first paragraph. Applicant's argument with respect to enablement is found

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convincing. The rejection of claims 1 and 5-10 under 35 USC, first paragraph, is withdrawn.

Claims 1, 5-8 and 10 have been rejected in a previous Office Action under 35 USC 112, second paragraph. Based on applicant's amendment, the rejection of claims 1, 5-7, and 10 is withdrawn. However, the amendment to claim 9 has introduced the phrase "preferably from 40 to 99% by weight". A broad range together with a narrow range that falls within the broad range in the same claim is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Therefore, claim 9 is rejected under 35 USC 112, second paragraph. Additionally, the text of claim 8 has not been amended to correct the use of the phrase "in particular". Therefore, the rejection of claim 8 is maintained.

Response to Amendment: Claim Rejections -35 USC § 102

Claims 1 and 10 have been rejected in a previous Office Action under 35 USC 102(b). Based on applicant's amendment, the rejection is withdrawn.

Response to Arguments: Claim Rejections -35 USC § 103

Claims 5-9 have been rejected in a previous Office Action under 35 USC 103(a) as being unpatentable over Mita et al (US Pat. 5,278,269) in view of Ribba (US Pat. 4,800,220).

Applicant argues that the teachings of Mita are not relevant to the present invention because Mita's polymers are cationic or cationogenic while the polymers of the present invention are anionic or anionogenic. It is the position of the examiner that the polymers of the present invention are not strictly anionic or anionogenic, as claim 5, section m includes R^{10} with terminal amino groups.

Applicant argues that the undesirable side reaction of ester hydrolysis would not motivate one skilled in the art to combine the references of Mita and Ribba. The position of the examiner is not that such a side reaction would motivate a combination of references, but rather that the side reaction would inherently produce a certain amount of ester hydrolysis. However, with the amendment of the independent claim to include weight percentages, a small amount of undesired ester hydrolysis is not considered within the scope of the present invention. The argument with respect to inherent presence of (meth)acrylic acid is withdrawn.

Applicant argues that neither Mita nor Ribba alone or in combination suggest the combination of components a) and d). However, Ribba teaches the use of substituted acrylate esters that satisfy the conditions of both a) and d) of the instant invention. Ribba teaches that examples include butyl acrylate, butyl methacrylate, lauryl acrylate, and stearyl methacrylate. Additionally, Ribba teaches that "[t]hese esters may be employed separately or in mixture to form the polymers of the invention" (see col. 4, lines 15-44).

With regard to motivation for combining references, the position of the examiner is that it would have been obvious to one of ordinary skill to have included at least one

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α,β -ethylenically unsaturated carboxylic acid in the composition as taught by Mita in order to improve the solubility characteristics of the polymer product as taught by Ribba (see page 7, paragraph 20 of the previous Office Action).

The rejection of claims 5-9 under 35 USC 103(a) as being unpatentable over Mita et al (US Pat. 5,278,269) in view of Ribba (US Pat. 4,800,220) is maintained.

The following new grounds of rejection is made:

Claim Rejections - 35 USC § 103

Claims 1 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ribba (US Pat. 4,800,220) in view of Mori et al (JP 1213221).

Ribba teaches carboxylic copolymers usable as thickeners in aqueous media.

According to Ribba, products capable of dissolving in water while capable of acting as thickeners find applications in textile and cosmetic industries (see col. 1, lines 9-29).

The copolymers may be used in printing pastes for textiles or for the preparation of cosmetics (see col. 6, lines 54-59). The compositions of Ribba are comprised of an unsaturated carboxylic monomer including acrylic acid, a polyalkylene glycol ester of acrylic acid that satisfies requirement c) of the instant invention, and an ester of acrylic acid (see col. 2, line 1 through col. 4, line 44). In response to the previous Office Action, applicant argues that Ribba does not anticipate the combination of components a) and d), and that Ribba does not meet the 40-85% by weight limitation of component a).

However, Ribba teaches that the esters of (meth)acrylic acid "may be employed separately or in mixture to form the polymers" (see col. 4, line 39-40). Furthermore,

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differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955). Ribba lacks compositions in the form of a hairspray.

Mori teaches resin compositions for fixing hair colorant. The compositions of Mori are comprised of 20-50% by weight of "other vinyl-based monomer" that includes butyl (meth)acrylate (see page 4, lines 33-37), 5-25% (meth)acrylic acid (see page 2, lines 17-18), 30-70% polyether acrylate (see page 2, lines 10-16), and 5-20% of a C₈₋₁₈ acrylate ester (see page 2, lines 19-20). The amount of the "other vinyl-base monomer" contributes to the appropriate hardness and softness of the resulting film (see page 4, lines 31-37). The amount of C₈₋₁₈ acrylate ester contributes to water resistance and softness of the resulting film (see page 4, lines 23-30). Formulations as hair spray are also taught (see page 9, lines 1-25). The polymers of Mori provide good hair washability, good adhesion to hair, and form soft films.

It would have been obvious to one of skill in the art at the time the invention was made to have modified the compositions of Ribba by the addition of both butyl (meth)acrylate and a C₈₋₁₈ acrylate esters in order to control the hardness and softness of the resulting polymer films as taught by Mori as well as the incorporation of the resulting polymers in hair sprays for their washability and adhesion to hair as taught by Mori.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

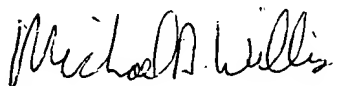
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Willis whose telephone number is (703) 305-1679. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diana Dudash can be reached on (703) 308-2328. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-2742 for regular communications and (703) 308-2742 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.



Michael A. Willis, Ph.D.
Patent Examiner
July 6, 2001



Michael Hartley
Primary Examiner
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